Natural Resource Protection News

From the Town of Canandaigua Environmental Conservation Board

Walk Into the Past

By: ECB Member Edith Davey

Would you like to take a walk into the past? Take a child – or just yourself – on a fossil walk. Walking up any of the numerous gullies surrounding Canandaigua Lake is a walk into the far distant past. It's fascinating.

The deeper the gully, the farther back in time you will reach. As erosion from rain storms washes down the gully, ancient fossils are dislodged and wash into the stream, making the lake shore also a rich source of fossils if you are accompanying small children or just don't wish to walk far.

The Town of Canandaigua was located near the equator at the bottom of a tropical sea about 400 million years ago. The shale stone that lies beneath much of our landscape is compressed clay hardened by the pressure of accumulating soil eroded from early continents over millions of years.

When the sea creatures died naturally or landslides covered the sea floor, their bodies were incorporated into the layers of clay that became shale. Fossils may have the same form as the animal or plant or may be simply the imprint of where the organism was buried in mud.

Devonian fossils are much, much older and smaller than dinosaurs (don't expect to find a tyrannosaur femur) and are mostly sea animals, although some fossils of ferns, trees and other land plants have been found locally. Tropical sea animals are brightly colored, but the fossils will be the same color as the surrounding stone as they were formed by replacement of cells with minerals. Occasionally, some bright pieces of shell are found.

You will find diverse parts of fossils as the harder parts of the animals are more commonly preserved. Many animals had more than one particular body form (think about Dachshunds and Great Danes) but were closely related.

Some Devonian animals are still with us in various forms. Sea lilies, chambered nautilus, snails, corals, sponges, jelly fish and various clams are modern relatives of extinct species. The discovery of a remnant population of brachiopods near New Zealand in recent years surprised scientists.

If you are going for a fossil walk, wear long pants, shoes that are good for wading, and take insect repellent, a fossil identification key and a collection sack. Unless you are a qualified geologist, *leave the hammer at home*. Striking rocks with a hammer can cause sparks to fly that may damage eyes and skin. Take a small magnifying glass if you have one.

Walk slowly and look along level layers of rock. Once you find a layer with fossils, follow that layer along the gully sides and you will find an astonishing variety of fossils.

The following sheet gives examples of fossils you may find locally. Feel free to take it along with you on your hike. If you click the picture, a larger file will open up that is easier to view on a phone or computer.

And also, if you have young readers who are interested in fossils, follow this **link** for a similar article written just for kids.

Trilobite

Crinoid

Crinoid stems

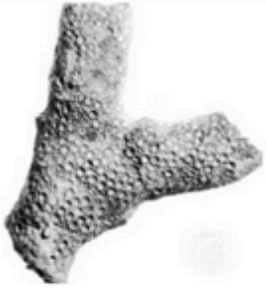
Brachiopod

Brachiopods

Horn corals

Nautiloid

Nautiloid



Bryozoan

Snails

Bivalve clams

Bryozoan

These examples show a few forms of the fossils most commonly found locally, but further exploration will be even more interesting. Many excellent collections are available for viewing and study at Finger Lakes Community College, the Rochester Museum and Science Center, the Palentological Research Institution in Ithaca, and the Buffalo Museum of Science are all within easy driving distance.